Date: October 1, 2002

To: WRP Board of Governors

From: WRP Managers Group and Science Advisory Panel

RE: SAP POSITION PAPER ON IMPROVING REGIONAL PLANNING

In May 2002, the WRP Science Advisory Panel (SAP) released its first position paper on *Improving Regional Planning of Wetland Ecosystem Restoration and Management in Southern California*.[1] This paper recommends that the WRP implement three major initiatives to improve regional planning and outlines specific actions for pursuing each initiative. Over the past four months, the SAP, Wetlands Managers Group (WMG), and County Task Forces have met to discuss the recommendations in the position paper and place them within the larger context of all the WRP's programs. This report summarizes the outcome of these discussions and outlines the next steps for the WRP in pursuing the three initiatives. **While no specific action item is being presented for Board decision at the October 2002 meeting, the SAP and WMG would like to bring to attention issues related to the implementation of the SAP-recommended initiatives that will require further input and decisions by the Board at future meetings.** The three initiatives recommended by the SAP and related actions are summarized in Table 1.

Table 1: Summary of Position Paper's Recommendations

1. Establish quantifiable recovery objectives. a. Maintain existing and increase wetland acreage b. Recover habitat diversity to reflect historic distribution to the extent possible c. Restore physical processes d. Recover biological structure and function e. Recover landscape elements of ecosystem structure
2. Develop decision support tools to aid in prioritizing preservation and restoration activities. a. Establish habitat acreage goals i. Improve the historical and present-day inventories by habitat type ii. Catalog monitoring data that can be used to develop habitat requirements for wetland species. b. Prioritize riparian corridor preservation and restoration in coastal watersheds. i. Review SWAMP assessment framework currently under development. ii. Develop data layers to support the SWAMP assessment.
3. Implement a regional monitoring program to measure the progress towards objectives. a. Update present-day and historical wetland inventories b. Develop a regional survey of resource condition and stressors c. Develop a program to monitor success of WRP restoration projects d. Improve coordination of project-specific monitoring e. Develop the administrative and financial infrastructure to support a monitoring program.

[1] Executive Summary is attached to this report. The full paper is included in the Governing Board meeting packet. In addition, the paper is available at http://www.coastalconservancy.ca.gov/scwrp.

Quantifiable Recovery Objectives

The WRP Regional Strategy outlines six-overarching goals for the WRP, but as stated in the position paper, "there is a need to better articulate the major elements of wetland ecosystem structure and function that must be recovered in order to ultimately achieve the Regional Strategy goals." Articulating more specific ecological objectives would improve project planning, selection, and evaluation. The quantifiable objectives would be the foundation for developing decision support tools and a regional monitoring program. The five categories and sub-categories outlined in the position paper provide a framework for developing more specific quantifiable objectives. The SAP will begin developing specific quantifiable objectives as part of the development of the regional monitoring program and decision support tools.

In discussions about setting quantifiable objectives, several questions were raised about the second objective -- "recover habitat diversity to reflect historic distribution to the extent possible." In particular, questions arose regarding how the historic distribution would be determined given the paucity of historic data and how the objective would be applied given the enormous changes to the Southern California landscape. As part of the process of developing more specific objectives, the SAP and WMG will work together to determine how to develop and apply information on the historic distribution of habitats in order to enhance both site-specific and regional planning.

Decision Support Tools

A key role of the Science Advisory Panel is to assist the WRP in setting priorities that will best achieve its ecological objectives. To do this, the SAP has identified the need to develop decision support tools that can aid in setting preservation and restoration priorities. These decision support tools must serve to identify regional or sub-regional priorities to improve recovery planning, as well as aid in the selection of projects. The position paper recommends two types of decision support initiatives: habitat acreage goals and a tool for assessing the ecological integrity of riparian areas. The need for decision support in riparian areas is particularly acute since the opportunities for preservation and restoration increase exponentially as the WRP moves upstream into the coastal watersheds.

The position paper recommends that the WRP prioritize acquisition and restoration of wetland and riparian habitat types which have experienced the greatest loss throughout the region. To that end, it recommended establishing habitat acreage targets as one of the decision support projects. Subsequent discussions among the WMG and SAP have highlighted the significant difference between prioritizing habitat types and setting numerical acreage targets, and have brought into question whether setting numerical targets would significantly improve regional planning. The WMG was particularly concerned that the process of setting acreage targets would come at a significant cost to the WRP in terms of staff time, funding, and perhaps most importantly, the strain on the positive working relationships on which the WRP is based. Given these concerns, the SAP agrees that the WRP should focus on identifying priority habitat types for acquisition and restoration rather than setting numerical acreage targets. To accomplish this, the WMG and SAP will work to compile historic data sources and determine how they can be used to prioritize recovery of wetland and riparian habitat types. If in the future the WRP determines that setting habitat acreage targets would resolve any significant impediments to recovery efforts or significantly improve wetlands restoration and management, this issue can be revisited.

To address the need for decision support for recovery of stream corridors, the SAP, with input from the WMG and Task Forces, is working with the NOAA Coastal Services Center to develop a GIS-based tool (referred to as SWAMP in the position paper) to assess ecological integrity of riparian systems at a landscape scale. The SAP and NOAA are currently developing the conceptual model on which the GIS analysis will be based. The WRP Watershed Coordinators are assisting the SAP in compiling the GIS layers needed to run the model. Once a prototype of the model is completed, it will be tested on five watersheds throughout the region. This pilot phase, funded through grants from NOAA and USGS, will allow the WRP to: 1) evaluate how best to incorporate the tool into regional recovery planning by the WRP and its partners; and 2) determine the data, funding, and staff resources needed to complete the next phase of the project. The WMG and SAP will also evaluate the utility of expanding the model to assess additional factors that influence WRP priorities such as feasibility, and socioeconomic considerations.

Through discussions with the WMG and Coastal Conservancy staff, it has become clear that decision support tools in addition to the SWAMP model are needed. The primary intended use of the SWAMP landscape-scale assessment is to identify regional priorities for recovery of riparian areas. Because of the coarse scale of assessment, the SWAMP model will not great enough detail about a particular site and thus is expected to provide only limited assistance in selecting and prioritizing projects. The SAP has begun discussing additional tools to help meet the full range of the WRP's decision support needs, and in particular a project-level decision support tool.

Below are questions currently under discussion by the SAP, WMG and Task Forces. While no official Board action is required at this time, discussion by Board members of these questions would be helpful.

- At what level or scale are decision support tools most needed (e.g. regional-wide – to identify high priority areas for preservation and restoration, or at a project level-- to clarify criteria used in project selection)?
- Do individual agencies have decision support needs that overlap with the WRP? If so, are there opportunities for collaboration?

Regional Monitoring

There is strong consensus among the WRP partners that a comprehensive, regional monitoring program is needed. The multi-level framework outlined by the SAP would integrate project-specific monitoring with regional assessments into a robust program for evaluating both the WRP's efforts and the overall health and functioning of Southern California's wetlands. With grant funds from the U.S. Environmental Protection Agency, the SAP has begun working on the five-step action plan for developing a regional monitoring program. This project will provide the opportunity to flesh-out the details of what will be needed in terms of funding, staffing, and data resources to implement a regional monitoring program.

Issues for which no official Board action is required, but will require decisions at future meetings include:

- **Scope.** The scope of a wetland monitoring program design to support and inform the WRP organization and it's activities may address a minimal set of questions. Many of the partner agencies of the WRP either conduct wetland monitoring or have monitoring needs. While it

would be more efficient to coordinate the regional monitoring program so that it meets the needs of the WRP organization needs as well as the greater needs of the partner agencies, such an arrangement would call for greater collaboration and commitment among WRP partner agencies. Issues that would need to be addressed under such an arrangement include:

- What are the WRP partner agencies' wetland management information needs that would be addressed by a regional monitoring program?
- In the case that monitoring program results identify issues requiring future regulation, would this negatively impact the public's (and particularly landowners') perception of the WRP as a non-regulatory program?

- **Funding the program.** Although it is too early to estimate the costs of a regional monitoring program, it is an appropriate time to begin considering how to pay for such a program. In the past, project-level monitoring has been included in the project costs and this would continue to be true. However, there is currently no mechanism for funding a regional survey. Should these regional assessments be financed from funds currently appropriated to the Conservancy for projects or are there other sources that could be used without impacting project funds?

- **Monitoring Program Management and Maintenance/Dissemination of Data**. Who is the appropriate lead agency or organization to management the monitoring program, maintain and disseminate the data acquired from such a program?

Summary

The WMG and SAP fundamentally agree on the recommended initiatives outlined in the Position Paper. Over the next year, the SAP will be working with the WMG and Task Forces towards the fleshing out the details important for the implementation of these initiatives. Specific issues that the SAP and WMG will focus on include:

1. Developing a specific action plan for the regional monitoring program, including activities in the three program elements (inventory, regional survey, and coordination of project level monitoring);

2. Developing specific quantifiable recovery objectives by wetland class as a part of a regional monitoring program;

3. Developing and testing the SWAMP landscape assessment methodology, which includes evaluating its ultimate role in decision support and regional monitoring, and identifying data, funding and staff resources need to complete the next phase of the project

4. Exploring the development of additional decision support tools to assist the WMG in making project-level evaluations regarding restoration and preservation opportunities

5. Compiling information on historic distribution of wetland and riparian habitats and determine how this information can be used to help prioritize recovery efforts

IMPROVING REGIONAL PLANNING OF WETLAND ECOSYSTEM RESTORATION AND MANAGEMENT IN SOUTHERN CALIFORNIA: WRP SCIENCE PANEL RECOMMENDATIONS

EXECUTIVE SUMMARY

The Science Advisory Panel (SAP) was established by the Southern California Wetland Recovery Project (WRP) Governing Board to ensure that the best available science is incorporated into the decision-making processes of the WRP, and to advise the board on regional goals, objectives, project criteria, and priorities. This document is the first in a series of SAP position papers making specific recommendations to the WRP on improving regional planning of wetland ecosystem restoration and management in Southern California.

The recently published WRP Regional Strategy lays out a long-term vision, programmatic goals, and implementation strategies to guide WRP efforts. **To ensure these goals are achieved, the SAP recommends implementing three major initiatives designed to better support regional planning:**

1. **Establish quantifiable recovery objectives;**
2. **Develop decision support tools to aid in prioritizing preservation and restoration activities; and**
3. **Implement a regional monitoring program to measure the progress towards objectives.**

Quantifiable recovery objectives differ from the Regional Strategy goals in that they specify the elements of ecosystem structure and function that must be maintained or restored to achieve "recovery." These scientific criteria form the basis by which to evaluate WRP progress towards recovery. The also constitute the ecological criteria that should be considered in prioritization of WRP preservation and restoration projects. **There are five recommended quantifiable recovery objectives:**

1. **Maintain existing and increase wetland acreage;**
2. **Recover habitat diversity to reflect historic distribution to the extent possible;**
3. **Restore physical processes;**
4. **Recover biological structure and function; and**
5. **Recover landscape elements of ecosystem structure.**

This paper provides a detailed explanation and a rationale for why each objective is important.

Once WRP programmatic goals and quantifiable recovery objectives have been established, the next step is to use them to guide WRP preservation and restoration activities, based on a set of clearly defined priorities. In determining the priority of a project for funding, it is important that its merit to the ecological recovery of the region be clearly established, along with considerations such as technical feasibility and cost. The **SAP recommends that the WRP develop decision support tools to help prioritize the funding of preservation and restoration activities based on the ecological criteria outlined in the quantifiable recovery objectives.** The WRP should undertake two types of decision support projects: 1) establishment of habitat acreage goals, and 2) prioritization of riparian corridor preservation and restoration in coastal watersheds.

Establishment of habitat acreage goals is a means of prioritizing funding to restore the habitat types that have experienced the greatest loss. The targets can be developed by: 1) comparing

historical versus present day wetland acreage by habitat type, and 2) developing the habitat acreage requirements of indicator and endangered species using monitoring data and best professional judgment. Implementation of a habitat goals project depends on the development of data sources for this assessment. **The SAP recommends updating the historical and present-day inventories by habitat type, and cataloging monitoring data used to develop habitat requirements for wetland species.** The SAP will provide specific recommendations on establishing targets once the availability and quality of these data are documented.

Given the recent expansion of recovery activities into freshwater wetlands and adjacent riparian habitat, the WRP must develop a coherent strategy for allocating funding to projects in the 10,000 sq km of southern California coastal watersheds. This strategy must be based in part on an assessment of the merits of the project from an ecological perspective. **The SAP recommends that the WRP pursue the development of a decision support tool that will aid in identifying high priority riparian areas for preservation and restoration.** This tool could be used by the WRP Managers group to guide the annual project selection, and by the WRP County Task Forces as a preliminary screening tool to develop priorities for the watershed management planning process.

The SAP has begun to work with the NOAA Coastal Services Center (CSC), WRP Managers group, and Task Forces to adapt the Spatial Wetlands Assessment for Management and Planning (SWAMP) model for WRP use. SWAMP, a NOAA CSC product, is a GIS model used to examine the ecological significance of a wetland to its watershed by assessing contributions it makes to habitat support, water quality, and hydrology. NOAA CSC has agreed to provide the technical expertise to adapt SWAMP for southern California. In developing SWAMP, the WRP will engage in a discussion of the ecological attributes of riparian areas that merit preservation and restoration, and relative importance of each. **The SAP advocates that the WRP support the implementation of the SWAMP decision support tool by:**

1. **Reviewing SWAMP assessment framework currently under development, and**
2. **Developing data layers to support the SWAMP assessment (details on these data layers are given in Section IV.B).**

By setting regional goals and quantifiable recovery objectives, the WRP has clearly defined goals for the program, and the elements of wetland structure and function that must be restored for ecosystem recovery. The next logical step is to implement a monitoring program that assesses baseline conditions, measures recovery progress, and evaluates the effect of anthropogenic stressors constraining recovery. This program would have many other benefits. Among them, it would provide an integrated and cost-effective regional approach to addressing the management information needs of WRP partners. It would streamline reporting of monitoring data, making them more accessible for routine scientific evaluation of restoration and management techniques. The monitoring program could also serve to verify the effectiveness of wetland regulatory and management policy. **Recommendations for the implementation of this program include the need to:**

1. **Update present-day and historical inventories of wetland ecosystems,**
2. **Develop a regional survey of resource condition and stressors,**
3. **Develop a program to monitor success of restoration projects;**
4. **Improve coordination of project-specific monitoring, and**
5. **Develop the administrative infrastructure to support this program.**

The SAP envisions that this position paper will serve to initiate a lively dialogue among WRP partners on ways to improve regional planning, and build support and momentum for the implementation of the three recommended initiatives described in this document. We look forward to feedback from the WRP partners on the contents of this paper. Future position papers will focus specifically on detailing specific assessment frameworks and detailed implementation plans for regional monitoring, habitat acreage goals, and the SWAMP decision support tool.